A STUDY OF SUSTAINABILITY INTEGRATION IN THE PERFORMANCE MANAGEMENT SYSTEM: THE CASE OF AN OIL AND GAS COMPANY

ROSHNI ANN GEORGE

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by

ROSHNI ANN GEORGE

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TABLE OF CONTENTS

Page

LIST OF TABLES

LIST OF FIGURES

LIST OF ABBREVIATIONS

API	American Petroleum Institute
CCG	Committee for Companies linked to the Government
CSR	Corporate Social Responsibility
EIA	Environmental Impact Assessment
EMS	Environmental Management System
GHG	Greenhouse Gas
HSE	Health Safety and Environment
ISO	International Standard Organisation
KPI	Key Performance Indicator
MCS	Management Control System
NGO	Non-Governmental Organisation
NIE	New Institutional Economics
NIS	New Institutional Sociology
OHSAS	Occupational Health and Safety Management System
OIE	Old Institutional Economics
PMS	Performance Management System
SCS	Sustainability Control System
SD	Sustainable Development
TBL	Triple Bottom Line
UNEP	United Nations Environmental Programme
UNFCCC	United Nations Framework Convention on Climate Change

KAJIAN INTEGRASI KELESTARIAN DALAM SISTEM PENGURUSAN PRESTASI: KES SYARIKAT MINYAK DAN GAS

ABSTRAK

Dalam dunia hari ini, kurang keprihatinan terhadap alam sekitar dan sosial dalam industri minyak dan gas boleh memberikan kesan yang serius bukan sahaja kepada organisasi malahan kepada kerajaan dan masyarakat. Mengekalkan legitimasi organisasi banyak bergantung kepada keupayaan organisasi mengurangkan risiko alam sekitar dan sosial. Syarikat pemikiran ke hadapan mengambil langkah-langkah yang berkesan untuk menangani isu-isu ini dengan melaksanakan penyelesaian yang meningkatkan prestasi mampan. Menerapkan kemampanan dalam organisasi adalah penting untuk meningkatkan prestasi sosial dan alam sekitar teteapi memerlukan integrasi kelestarian dalam sistem pengurusan prestari organisasi. Walau bagaimanapun, penyelidikan tentang integrasi kemampanan dalam sistem pengurusan prestasi masih merupakan satu bidang baru muncul. Oleh itu, kajian ini bertujuan untuk menyumbang literatur dalam bidang kajian ini dengan mengkaji integrasi kemampanan dalam sistem pengurusan prestasi sebuah syarikat minyak dan gas yang beroperasi di negara membangun. Penyelidikan kualitatif kajian kes telah dijalankan di organisasi dan sumber utama data yang dikumpul dalam kajian ini ialah temubual dengan pengurus dan eksekutif daripada ibu pejabat, dua buah anak syarikat dan pembekal. Untuk menganalisis data yang diperolehi, kajian ini telah menggunakan rangka kerja pengurusan prestasi Ferreira dan Otley (2009), teori sosiologi institusi baru (NIS) dan rangka kerja integrasi kelestarian Gond et al.

(2012). Hasil kajian ini menunjukkan peningkatan penubuhan kelestarian ke dalam sistem pengurusan prestasi organisasi kes itu. Tambahan pula, strategi kelestarian di organisasi korporat mempengaruhi amalan anak-anak syarikat dan pembekal. Pertubuhan laluan kemampanan untuk integrasi kelestarian di organisasi bermula daripada strategi *decoupled* yang tidak aktif terjadi apabila sistem pengurusan prestasi masih membangun dan kemampanan diuruskan sebagai tindak balas kepada tekanan yang semakin meningkat bagi meningkatkan prestasi keselamatan dan kesihatan. Apabila pekerja memperolehi pengetahuan yang lebih mendalam tentang isu-isu kelestarian, integrasi antara sistem pengurusan prestasi dan sistem pengurusan prestasi kemampanan mula berlaku, yang mana mendorong kepada peningkatan integrasi secara teknikal dan organisasi yang lebih mampan (berpindah ke strategi kelestarian pematuhan yang didorong). Apabila satu anjakan budaya ke arah kelestarian mula berlaku di dunia, faktor normatif dan *mimetic* yang membawa kepada konfigurasi integrasi kelestarian bercabang dan gandingan ketat antara kedua-dua sistem pengurusan prestasi. Walaupun sistem pengurusan prestasi dan sistem pengurusan prestasi kelestarian kini boleh digambarkan sebagai agak longgar, terdapat tanda-tanda gandingan ketat antara sistem dan satu strategi kelestarian bersepadu sepenuhnya pada masa hadapan.

A STUDY OF SUSTAINABILITY INTEGRATION IN THE PERFORMANCE MANAGEMENT SYSTEM: THE CASE OF AN OIL AND GAS COMPANY

ABSTRACT

In today's world, overlooking environmental and social impacts in the oil and gas industry can have serious consequences not only for organisations but also for governments and societies. Maintaining organisational legitimacy is largely dependent on an organisation’s ability to effectively reduce environmental and social risks. Forward thinking companies are taking steps to effectively address these issues by implementing solutions that improve sustainable performance. Embedding sustainability in the organisation is vital to increase social and environmental performance but requires the integration of sustainability into the organisation’s performance management systems. However, research on integrating sustainability in performance management systems is still an emerging field. Therefore, the purpose of this study is to contribute to the body of literature by investigating sustainability integration in the performance management systems of an oil and gas company headquartered in a developing country. A qualitative case study research was conducted in the organisation and the primary source of data collected in this study were interviews with managers and executives from the headquarters, two subsidiaries and a supplier. To analyse the data collected, this study utilized the Ferreira and Otley (2009) performance management framework, New Institutional Sociology (NIS) theory and the Gond et al. (2012) sustainability integration

framework. The findings reveal increasing incorporation of sustainability into the performance management systems of the case organisation. Furthermore, the sustainability strategy at the corporate organisation influenced the practices of the subsidiaries and supplier. The case organisation’s pathway to sustainability integration commenced from the dormant decoupled strategy, when its performance management systems were still developing and sustainability was managed in response to growing pressures for increased health and safety performance. As employees obtained a deeper knowledge of sustainability issues, integration between the performance management systems and sustainability performance management systems began to occur, which underpinned greater technical and organisational integration of sustainability (move to a compliance-driven sustainability strategy). As a culture shift towards sustainability began to occur in the world, normative and mimetic factors led to a peripheral sustainability integration configuration and tighter coupling between the two performance management systems. While the performance management systems and sustainability performance management systems could currently be described as relatively loosely coupled, there are further signs of tighter coupling between the systems and the promise of a fully integrated sustainability strategy in the future.

CHAPTER ONE: INTRODUCTION

1.0 Introduction of the Chapter

This chapter provides a general introduction of the study by describing the structure of the research. The chapter begins with the background of the study; an overview of the oil industry in the country of the case study, the importance of sustainability to the oil industry and the role of performance management systems in supporting sustainability. The problem statement is then put forward, followed by the research questions, theoretical framework, research method and contributions of the study. Finally, the chapter concludes with the organisation of the whole thesis and its chapters.

1.1 Background of the Study

The oil industry in the country the case organisation is located in is one of the biggest contributors to the country's gross domestic product, enhancing economic growth and social development. The oil and gas industry was the second largest contributor to the country's export in 2010, contributing 11.4% of the total export share. Apart from oil and gas, there were also petrochemical products which contributed 4.6% of the total manufacturing export[1].

Petroleum production in the country started early in the 20th century in one of its eastern states. Prior to the mid-1970s, petroleum concessions were granted by state governments to oil companies who had exclusive rights to explore and produce petroleum resources. The companies then paid royalties and taxes to the respective state governments. However in the mid-1970s, as a result of the enactment of an important legislation, Oilcorp (the case organisation) came into existence as the

[1] The Country's Report on Productivity," 2009/2010 [name not disclosed to maintain confidentiality]

national oil company of the country. It became the sole owner of petroleum resources in the country with full rights to explore and produce those resources.

In addition to this, Oilcorp was also given the right to manage and control exploration, development and production of the resources. There are two main types of activities related to petroleum resources, mainly upstream and downstream activities. Production Sharing Contracts (PSCs) with multinational oil and gas companies became the instruments by which Oilcorp managed revenues and expenditures for upstream operations.

Contractors in such agreements not only fund projects but are also liable for risks related to operations in the country. The growth of the oil and gas industry has spurred the development of other related industries that provide petroleum services and products for these operators. This has encouraged the mushrooming and strengthening of locally owned businesses and given rise to the expansion of business and marketing of services and products regionally and internationally catering not only to upstream but also downstream operations.

Despite being the mainstay of global economic progress, the oil and gas industry is also known for devastating the environment, destroying the habitat of wildlife, and adversely affecting the livelihood of communities living near operation sites. Burning of fossil fuels remains the main cause of air pollution and greenhouse effects.

Besides, both upstream and downstream activities can lead to different environmental issues and risks. The environmental concern at the upstream level is more likely on marine and air pollution while at the downstream level, issues are related to land and air pollution. Furthermore, multinational oil and gas companies have often been accused of neglecting the welfare and development of communities in developing countries and jeopardising their health and income sources.

In addition, although the concept of petroleum as a non-renewable energy source has been accepted by many, little has been done by oil and gas companies to address this issue. Renewable energy such as solar and wind energy remains sidelined in favour of petroleum and coal. Companies in the oil and gas industry focus on short term profits and survival based on the assumption that petroleum reserves will last for decades and more reserves will subsequently be found instead of seriously considering the long term implications of running out of these resources.

Responsibility to meet future energy demands should fall more heavily on petroleum companies as they benefit most from these resources. Without dedicated research and development efforts to find viable renewable energy solutions while petroleum resources are still widely available to fund such activities, the world will potentially face a bleak future. Decreasing petroleum reserves would mean rising petroleum prices, inflation, economic crises and reduced opportunities for finding alternatives energy sources.

The increased interest in sustainability, especially due to recent environmental disasters and social issues, has made it a vital consideration for companies operating in this industry. Sustainability is normally understood in terms of the triple bottom line concept with its three (economic, environmental and social) dimensions of sustainability. Oil and gas companies need to reduce environmental and social risks while improving economic performance. The oil and gas industry can enhance performance and reduce risks in these three areas by managing its operations safely, reducing emissions, discharges, ecological and social impact while providing products and services at a reasonable cost.

However, most oil companies have been accused of ‘green washing’ in their marketing campaigns and corporate reports (Pulver, 2007). As such, it is important to develop business strategies and implement practical systems to enhance economic performance, while having high standards of environmental stewardship and socially responsible behaviour. Sustainable solutions are increasingly needed as the oil and gas industry faces complex challenges that are greater than ever before. Companies in this industry are confronted with the task of reporting sustainability related information efficiently and responsibly, while at the same time incorporating sustainability results into their business decision making. As sustainability requires the fusion of economic, environmental and social goals; the measurement, management and reporting of sustainability performance pose a big challenge.

Otley (2001) argues that the essence of contemporary management accounting themes have been to measure and manage organisational performance. Performance management systems have emerged as a means to holistically manage and control organisational performance (Ferreira and Otley, 2009). Performance management provides an avenue to examine both formal and informal controls used when implementing strategies and adapting to circumstances (Otley, 2001). Hence, performance management systems have enormous potential in addressing social and environmental issues, in addition to financial ones. The integration and improvement rather than the total replacement of existing tools and practices could be the answer to internalize sustainability related principles within internal operational mechanisms and strategies.

Formal control systems, such as budgets and performance evaluation, are normally focused on financial or quantitative aims with minimal attention to social and environmental values, but most companies nowadays have informal controls that embed social and environmental principles (Norris and O'Dwyer, 2004). Such positive developments highlight the possibility of having sustainability integrated into performance management systems to entrench environmental and social principles into a company's internal operations and strategies. In order to adequately integrate sustainability into the organisation, formal (objectives and measures, performance measurement systems, reward systems) and informal (corporate culture, leadership commitment) controls are both necessary. Moreover, they should be well combined and aligned to avoid the emergence of tensions.

Sustainability integrated into performance management systems[2] has the potential to create a holistic performance focus in the organisation as information on potential environmental and social impacts, sustainability initiatives and achievements, stakeholder reactions as well as corporate financial performance can be obtained through the system (Epstein and Roy, 2001). However, Berry et al. (2009) point out that not much focus has been given to research on control and sustainability.

Most research on integrating sustainability into management accounting systems has been focused on individual sustainability tools and systems such as the balance scorecard and environmental management accounting. Furthermore, only a small number of researchers have examined the barrier and enablers of sustainability integration into management accounting systems. There are not many studies that look at why sustainability is made into a core strategic focus in oil and gas companies or the way it is holistically integrated into the overall performance management system.

Hence, this study contributes to the understanding of how sustainability may be integrated into organisations' performance management systems and form part of their strategic orientation by using the New Institutional Sociology (NIS) theory and the Ferreira and Otley's (2009) performance management framework. Drawing from a case study of an oil and gas company identified as Oilcorp, several integration

[2] In this proposal, the term 'performance management system' is used interchangeably with 'management control system' (the original term used by Epstein and Roy [2001]). This interchangeable use will be further explained in the subsection on 'performance management'.

configurations are traced using Gond et al.'s (2012) framework of paths to sustainability integration. The configuration of Oilcorp is initially characterized as a dormant decoupled strategy, and then advances through the compliance-driven sustainability strategy and the peripheral sustainability integration configuration and is currently moving towards an integrated sustainability strategy. By tracing Oilcorp's path to sustainability, this study highlights barriers and enablers of sustainability integration and discusses key focus areas for successful integration into the performance management system.

1.2 Problem Statement

The oil industry is an industry that has the potential of causing serious environmental and social disasters due to the high risk nature of its operations. However, companies often take measures to strengthen safety and environmental performance only after a serious environmental catastrophe which eventually leads to adverse reactions in the media. This causes the public to question the offending company's policies and practices, resulting in a significant decrease in share price and sizable financial expenditure to rectify the unfolding problems.

In the Gulf of Mexico for example, the explosion on the Deepwater Horizon oil platform continued for 87 days and resulted in one of the largest accidental marine oil spills in history, causing eleven deaths and widespread impact on the local environment and society. This gave rise to BP spending $17.7 billion as of 31st December 2010 for response activities and consequently implementing a wide-ranging change programme (BP Sustainability Review, 2010).

According to a US government safety panel, BP applied reduced process safety standards to oil rigs that were contracted out to other companies (the Deepwater

Horizon rig was operated by the drilling contractor Transocean) compared to those on its own facilities. The multinational company also focused on financial risks much more than process safety risks. The panel concluded that BP did not conduct comprehensive hazard evaluation for accident risks on the Deepwater Horizon rig because large risk evaluation programs focused on BP assets and not those of contracted firms (The Star Newspaper, 25 July 2012).

The BP disaster shows the danger of oil companies not seriously considering sustainability issues across the value chain and at all levels of business operations. Hence, oil companies should not just react to environmental and social disasters but take a proactive stance and make sustainable strategies a significant part of managing their operations. A study on 87 oil and gas firms in the United States found that sustainable business spending in the oil and gas industry is rising in the areas of environmental remediation, pollution control and prevention, industrial energy management and on-site renewable energy (Verdantix, 2014). However, the increase in sustainability spending does not reflect a concerted and serious effort to embrace sustainability, especially as popular new cost effective methods of extracting unconventional reserves adversely impacts the environment and has made renewable energy less competitive (Lozanova, 2014).

Furthermore, the second half of the year 2014 saw world oil prices more than halved as production has been increasing even as there is weak demand due to poor economic growth worldwide (Bowler, 2015). Reduced profits in the past have seen some oil and gas giants drastically reduce spending on high capital renewable energy such as wind and solar power to focus on investments with better returns such as bio-fuel technologies and cleaner ways of using fossil fuels which are far from ‘green’ (Webb, 2009). This is reflective of a ‘weak sustainability’ position that de-emphasises environmental values and social justice while overemphasising efficient use of materials and energy (Ball and Milne, 2004).

In order to effectively manage their environmental and social impact, companies need to incorporate sustainability into their strategic focus and develop systems and processes that can adequately monitor and provide useful information about actions that affect sustainability. Bebbington, Brown, and Frame (2007) argue that organisations that seek to report their contribution to sustainable development could be expected to have several internal processes in place for this purpose. Traditional management control systems, with their focus on profit maximisation, do not adequately address sustainability concerns and are thereby ineffective in meeting the needs of wider stakeholders. Ball and Milne (2005) see the need for radical change in order to achieve sustainable outcomes. Increasingly, organisations are becoming more aware of the importance of performance management systems as a mechanism to support comprehensive organisational changes and the necessity of adapting such systems to enable successful change (Otley, 2001).

Performance management systems are able to link organisational objectives and strategy to internal mechanisms (Langfield-Smith, 1997) and can thrust organisations in the direction of sustainability if used appropriately. In light of the vital need for the oil and gas industry to address environmental and social impact, performance management systems with a sustainable focus could provide substantial benefits. Nevertheless, the integration of social and environmental concerns in performance management systems and the way the corresponding information is used for decision-making is still not widely researched (Berry et al., 2009; Durden, 2008).

Furthermore, there are limited studies undertaken to understand in particular how oil and gas companies in developing countries are using their performance management systems to meet sustainable objectives. As such, research on the integration between sustainability and the performance management system of an oil and gas company in a developing nation is needed. Hence, this study has attempted to close the gap in literature by exploring why and how sustainability became the strategic focus of an oil and gas company located in a country striving to achieve a developed nation status. A case study was conducted to understand the process of integrating sustainability into the performance management system, whereby interviews enhanced comprehension of the phenomenon. In the next section, the research objective and questions of the study are presented.

1.3 Research Questions

The main objective of this study is to comprehend the integration of sustainability in the performance management system of an oil and gas company located in a developing country. This objective guides the development of the research questions to be used in the study. The questions are as follows:

1) Why did sustainability become part of the strategic focus of the organisation?

2) How was sustainability integrated across the organisation, specifically in its two main subsidiaries and a key supplier? What were the key components of the sustainability performance management system?

3) What were the barriers to and enablers of sustainability integration in the performance management system from a cognitive, organisational and technical perspective? How have these barriers and enablers resulted in the organisation's specific path to sustainability integration?

1.4 Theoretical Framework

To guide the collection and analysis of data, a theoretical lens is utilised to provide a means of understanding the processes of interest at the case organisation. Institutional theory was used in this research to identify the factors that led to the integration of sustainability in the oil and gas company.

New institutional sociology is an approach that looks at the how the external environment imposes pressures on organisations. In order to get an understanding of why sustainability was integrated in the performance management system, it will be useful to use new institutional sociology to understand the institutional pressures that led to sustainability becoming a strategic focus of the organisation.

However, to get a fuller understanding of what shapes management accounting practices, it is important to study from within the organisation the process of management accounting practices development (Scapens, 2006). Research on sustainability and performance management has focused on how individual tools or systems to control sustainability performance are used and the impacts of such systems on financial and non-financial performance. However, there has been relatively little research to examine performance management systems holistically. Furthermore, little research has been conducted to explore the integration of traditional and sustainability performance management systems (Gond et al., 2012). Hence, this study has used the Ferreira and Otley (2009) and Gond et al. (2012) frameworks to analyse the research data and understand how the case organisation has designed, used and aligned both systems to enhance sustainability.

The use of the Ferreira and Otley (2009) framework will enable the examination of how sustainability is integrated in the performance management systems in a more holistic manner. Furthermore, Gond et al.’s (2012) conceptual framework with eight configurations on the strategic integration of sustainability will shed light on the different possible configurations in organisations. The configurations depict the overall level of sustainability integration in performance management systems and identify diagnostic and interactive use of traditional and sustainability PMSs. Hence, the configuration that corresponds most closely to the case organisation will be determined using the framework. Furthermore, the sustainability change process can be traced and the pathway of the organisational integration of sustainability identified using this framework. The theoretical framework in this study was useful in determining how the case organisation designed and used its traditional and sustainability PMSs as well as enabled the identification of the barriers and enablers of integration.

1.5 Research Method

In this section, the approach used to investigate the research objective and related questions are explained. As the key objective of the study was to understand the way sustainability is incorporated into the performance management system, a qualitative research methodology using a naturalistic interpretive approach was found to be a more suitable approach.

A qualitative research design can be developed to explain social experiences or events, providing more detailed and comprehensive information about the events by utilizing the potential of the ‘how’ and ‘why’ questions. Qualitative research enables the understanding of the processes, systems, implementation of practices, behaviour of employees, routines and establishments of rules during the course of the research in the organisation. A quantitative approach by survey would not have enabled the researcher to obtain in depth understanding about the subject.

In addition, this research found the single case study approach useful to investigate how the oil company integrates sustainability into its strategy and performance management system. The case study approach provided an opportunity to understand the adaptation of performance management techniques, procedures and systems for sustainability and the way in which they are used and understood by organisational actors.

A case study gives the researcher the opportunity to deal with many different types of evidence like documents, interviews and observations. This case study was based on primary and secondary data collection methods. Following a review of literature, research visits were made to the case organisation to conduct several interviews. Data was gathered from interviews with various levels of personnel in different departments, including health, safety and environment, planning, accounting, and other departments. Each interview lasted for about one to two hours. In addition, some relevant documentary review such as standard operating procedures, manuals, corporate social responsibility, sustainability and annual reports, was also undertaken to further increase understanding of the company’s performance management system and sustainability.

The organisation selected for this study was chosen based on its suitability in relation to the research objective and questions. That is, the appropriateness of the organisation is in relation to the focus of this research on performance management systems and sustainability. The case organisation is one where the actors within it are still learning how to incorporate sustainability into their business processes and is utilising their performance management system in order to achieve this aim.

Besides, the case organisation is part of a multinational organisation with a history of success due to its business improvement efforts and ability to change and adapt. Moreover, the organisation has sustainability reporting mechanisms which is aimed at informing stakeholders that it is a socially and environmentally responsible firm. In line with this stance, the case organisation has embarked on several improvement activities and gained a number of sustainability related awards. Hence, the organisation was assumed to be able to provide a rich source of data for the study. Following this overview of the research method, the contributions of the study are discussed next.

1.6 Contributions of the Study

This research makes several contributions to both theory and practice. The study provides a basic body of knowledge on performance management systems in the oil industry, in particular, in an oil and gas company. At present, there is not an extensive body of literature to address this emerging issue for the oil industry. Besides, research on how organisations can holistically manage sustainable performance through the use of performance management systems is limited. Sustainability research has been more focused on other industries in a piecemeal way but as the issue is especially important to the oil and gas industry, research should be undertaken holistically to enhance the future sustainability of the industry, thereby ensuring a better future for countries. Hence, the findings of this study is hoped to fill this gap and encourage further research in this area. The use of the Ferreira and Otley (2009) framework enabled the identification of holistic sustainability integration in the performance management elements stipulated in the framework.

This study also clarifies why sustainability was integrated into the performance management system of an oil company in a developing country using institutional theory. There is a gap in literature to address why sustainability has become a strategic focus in developing countries. Research on corporate sustainability in developing countries is relatively limited compared to research in developed countries (Gray, Kouhy, & Lavers, 1995; Islam & Deegan, 2008; Sharma & Starik, 2004). Findings of studies in developed countries cannot be compared to developing countries effectively due to socio-economic differences (Belal & Owen, 2007). As a result, this research was conducted to address this current gap.

Furthermore, by drawing on the Gond et al. framework (2012), the performance management change process and the case organisation path to sustainability was examined. The practical application of the performance management system and barriers to and enablers of sustainability integration was discovered by examining the cognitive, organisational and technical dimensions of integration. This resulted in the detailed identification of the steps organisations in similar situations can take and pitfalls to avoid in sustainability integration. The findings of this research will hopefully enable oil companies to better integrate sustainability into their performance management system to effectively improve their sustainable performance and also contribute to the sustainable development of developing countries. The final section of this chapter is presented next.

1.7 Organisation of the Thesis

The thesis is organized into six chapters which will be discussed next. The first chapter has presented the background of the study; the problem statement, research objectives, research questions, theoretical framework, research method and contributions of the study.

The second chapter presents the relevant literature that motivates the research objective and related research questions and is mainly drawn from the broad areas of management accounting change, performance management systems and sustainability.

The third chapter provides a brief description of theories used in management accounting research; this is followed by an explanation of New Institutional Sociology theory and the concept of institutional isomorphism and decoupling; the Ferreira and Otley (2009) framework and finally the Gond et al (2012) framework on sustainability integration.

The fourth chapter explains the research method used in the study and starts with an overview of qualitative research followed by an explanation about the philosophical assumptions in this research. Next, the research paradigm and research approach of this research is presented. Finally, the research design, data collection and data analysis is described.

The fifth chapter discusses the findings of the study which revolves around the integration of sustainability in the performance management system of an oil and gas company headquartered in a developing country, two of its key subsidiaries and one of its main suppliers. The chapter begins with the background of case company. Following that, the journey towards a more sustainable focus in the company and the manner sustainability is integrated into the different areas in the performance management system of the company and its subsidiaries are explained. Finally, the influence of the company and other factors on the performance management system of its supplier in terms of sustainability and HSE related initiatives is discussed.

The sixth chapter presents the theoretical analysis of the case findings and highlights several contributions and limitations of the study. The institutional factors that have affected the organisation's approach to sustainability and the barriers to as well as the enablers of integration from a socio-technical perspective are analysed. New Institutional Sociology theory was used to analyse the different forms of isomorphic forces present in the case. Using the Gond et al. (2012) framework, the research data was then analysed against eight configurations depicting ideal relationships between the strategy-making processes and performance management systems (traditional and sustainability PMSs). Three different dimensions of sustainability integration in the performance management system; cognitive, organisational and technical integration; are identified in the four configurations corresponding closely to the case organisation's path. The path to sustainability integration in strategy is explored throughout the four different stages of integration and involves analysis of systemic integration (low to a high integration) and strategic mobilization (diagnostic to interactive use). Then discussions of contributions from both theoretical and practical aspects, followed by some limitations of the study are presented. The chapter ends by offering possible avenues for future research.

CHAPTER TWO: LITERATURE REVIEW

2.0 Introduction of the Chapter

This chapter reviews relevant literature related to the research objective and research questions of the study. The literature is mainly drawn from the broad areas of management accounting change, performance management and sustainability. Although, a great body of literature lies within these areas, it is not possible to provide an all inclusive review in this thesis. Therefore, this chapter is limited to the literature that relates to the motivation for this study within these broad areas.

2.1 Management Accounting Change

Organisations can experience challenges in managing change effectively and learning from the success and failure of others is vital to overcoming problems. Studies on organisational change often focus on the way change is achieved successfully (Morgan and Sturdy, 2000) as well as on the factors that lead to failure (Innes and Mitchell, 1996; Burnes, 2000; Nudurupati et al. 2011).

There are two main approaches to organisational change, planned change and processual change (Yazdifar et al., 2012). Planned change grew out of the seminal work of Lewin (1958), whereby change is viewed as a process of moving from one fixed state to another through a series of predictable or pre-planned steps (Burnes, 1996). Although the planned approach dominated research for many decades, this approach has been criticised for the last two decades as lacking a historical, processual and contextual perspective in an increasingly complex world (Pettigrew, 1995). Burnes (2000) argued that organisational change was not a set of discrete and self-contained events but instead was a continuous and open-ended process that involved a sequence of individual and collective events, actions, and activities unfolding over time in context (Pettigrew, 1997). When organisational change is viewed as a pre-planned and centrally directed process of ‘unfreezing’, ‘moving’ and ‘refreezing’, the complex and dynamic nature of internal practices and external conditions are ignored (Dawson, 1994; Burnes, 2000). Instead, an extensive and deep understanding of the role of extra-organisational and intra-organisational factors prior to and within the process of change can be achieved with the processual approach to change (Yazdifar et al., 2012).

Libby and Waterhouse (1996) found that forces that induce or act to impede change in accounting practice were not well researched (Atkinson et al., 1997). Calls to study the processes of change have been mirrored in management accounting research as well (Soin et al., 2002; Sharma et al. 2010), with Burns and Scapens stating in the year 2000 that there were not many studies conducted to understand the processes which result in new management accounting systems and practices. More than a decade later, Yazdifar et al. (2012) has found that still little is known about the drivers and consequences of management accounting change.

Kaplan and Johnson (1987) maintained that there was a loss of relevance in management accounting due to the failure of management accounting systems to evolve in response to new business demands. They further stated that despite considerable change in the nature of organisations and the dimensions of competition, there had been little improvement in the design and implementation of management accounting systems. Conventional management accounting techniques did not provide useful and timely information for good decision making and management control in a rapidly changing and dynamic environment.

Subsequent to the book Relevance Loss (Kaplan and Johnson, 1987), management accounting systems went through a change process to enable better decision making and control. Otley (2001) suggested that management accounting initiatives had changed in a number of ways from historic to forward-looking, control to planning, internal to external, cost to value and production to marketing. Alawattage and Wickramasinghe (2009) suggest that understanding the change process involves questioning how management accounting techniques emerge, evolve and transform due to new demands from the changing environment.

A processual approach of management accounting change examines the process of change within its historical and organisational context (Yazdifar et al., 2012). This approach assumes that management accounting change is not a series of linear events within a given period of time but instead is unpredictable, non-linear and socially embedded (Baxter and Chua, 2003). Thus, such an approach provides a broader understanding of the problem and practice of management accounting change within a complex environment (Soin et al., 2002).

A non-linear lens provides the basis for a more holistic approach to understanding management accounting change processes, whereby the researcher looks for multiple intersecting conditions which link contextual and processual aspects of change to outcomes instead of focusing on final causes or single grand theories (Pettigrew, 1997). Understanding holistic approaches and process dynamics involves studying how external (economic, social, political, competitive and sectoral environments outside the firm) and internal (structural, cultural and political environments within a firm) factors in a specific organisation influence the management accounting change process (Pettigrew, 1997; Yazdifar et al., 2012).

Research on management accounting change includes studies on the process of change (Quinn, 2011; Lukka, 2007; Ribeiro and Scapens, 2006) and barriers to change (Scapens and Roberts, 1993; Shields 1998; Granlund 2001). However, Quattrone and Hopper (2001) argued that the concept of change, its process and how they relate to accounting is taken for granted and poorly understood. This is partly due to management accounting research being too removed from the practice of accounting (Inanga and Schneider, 2005; Parker et al., 2011). Hence, there is a need to bring practice relevance back to management accounting research (Parker and Guthrie, 2010; Scapens and Bromwich, 2010; Malmi and Granlund, 2009). This can be done by ensuring that research is connected with specific organisational settings to derive meaning from context (Laughlin, 2011). Thus, studying the process of management accounting change can draw out the contextual importance of research efforts and enable practitioners to apply the findings of research in practice (Tucker and Lowe, 2014).

Although there is increasing interest in understanding management accounting and change processes in developed nations, research on management accounting in developing countries is limited (Herzig et al., 2012; Brandau et al., 2013; Halbouni and Nour, 2014). One of the few studies in Asia by Nor-Aziah and Scapens (2007) explored and examined a management accounting change process in a Malaysian public utility during the period of corporatization. Ahmad and Alwi (2004) conducted a study on management accounting practices in four Asian countries and found that there minimal use of the management accounting innovations due to the traditional management approach being still the norm in Asia.

Therefore, this research adopts a processual approach to study the dynamic process of management accounting change focusing on both the outer and inner organisational context of an oil and gas company located in a developing nation. It will be beneficial to add to literature in this field and in such a context. Therefore the research aims to provide a more extensive and deeper understanding of factors that are likely to enable and prevent changes in the performance management systems of the organisation. The processual study of how and why the performance management system changed in the organisation will provide researchers and practitioners of management accounting better understanding about the factors that influence the path of change and potential problems that could occur for organisations in a similar setting (Burns, 2000).

2.2 Organisational Management and Control

Organisational control is focused on ensuring that the behaviour of individuals and groups lead to the attainment of organisational goals (Flamholtz, Das and Tsui, 1985). Literature on control can be divided into three main perspectives, the sociological, the administrative, and the psychological perspectives (Flamholtz, Das and Tsui, 1985).

Control is accomplished through structural mechanisms of rules, policies, hierarchy of authority from the sociological perspective. The administrative perspective involves plans, measurement, supervision, evaluation and feedback. Psychological approaches rely on the mechanisms of goal and standard setting, extrinsic or intrinsic rewards, feedback or interpersonal influence (Flamholtz, Das and Tsui, 1985).

Organisational control systems are mechanisms (both processes and techniques) designed to ensure that the behaviour of individuals and groups lead to the attainment of organisational goals (Flamholtz, Das and Tsui 1985). Within such systems, management control systems (MCS) have been widely studied in the area of management accounting. Studies on management control systems have evolved since first published by Anthony (1965). Anthony (1965) separated control into the fields of strategic planning, management control, and operational control; resulting in the separation between MCS and strategic planning and between MCS and operational control (Langfield-Smith, 2008; Otley, 1999).

The control problem which was initially seen as mostly an internal matter has since been transformed into having an external focus. Furthermore, operational control and strategy especially have been considered in the study of management and control. Hence, the definitions of MCSs have changed over the years due to the changing nature of management accounting. Despite this, the meaning has remained relatively the same and management control is defined by Anthony and Govindarajan (2007), as the process by which managers influence individuals (and groups) to implement the organisation's strategies.

In order to ensure that the organisation's strategies are implemented, many different controls and mechanisms can be used (for a review of this see Chenhall, 2003). However, most studies focus only on one level of analysis (individual, group, etc.) or on only one form of control mechanism or on partial control systems. According to Otley (1999) and Malmi and Brown (2008), management accounting researchers have referred to the study of management controls as a package for decades. Malmi and Brown (2008) argued that controls do not operate independently from one another because new controls may influence other controls. However, research on management and control remains fragmented, making it hard to make sense of the myriad of studies, definitions and elements of controlling for organisational performance.

2.2.1 Performance Management

The nexus of any organisation is its management control systems (MCSs), which function to ensure that all processes and activities of the organisation are aligned to its strategies and objectives (Langfield-Smith, 1997). However, as mentioned in the previous section, definitions and descriptions of MCSs either overlap or vary significantly from each other (Malmi and Brown, 2008). As such, most research on MCSs focus on specific elements that do not appear to be linked to each other or the context in which they operate (Chenhall, 2003), resulting in conflicting findings (Langfield-Smith, 2008). Attempts to address this problem have been based on the change in the way management control is expressed, particularly in the use of the term performance management to reflect the same issues and concerns (Otley, 2003).

Performance management is a complex idea that has received increasing attention in management accounting literature. Ferreira and Otley (2009) use the term performance management systems (PMSs) to capture a holistic approach to the management and control of organisational performance. PMSs include all aspects of organisational control (including controls related to management control systems) and reflect a shift from traditional compartmentalised approaches to control in organisations (Ferreira and Otley, 2009), to a broader perspective of the role of control in managing organisational performance. Insights into the role of strategy in the development of performance management systems can be found in research that has emerged since the 1980s in the accounting and management literature (Langfield-Smith, 1997).

Even so, a growing number of researchers have used the terms ‘performance measurement’ and ‘performance management’ interchangeably. However, performance measurement is only one part within the much wider performance management system. The importance of looking beyond performance measurement and into performance management is supported by several authors (Otley, 1999; Schmitz & Platts, 2004). However, according to Pollitt (2006), there is a lack of comparative empirical research into the actual practice of performance management beyond the surface of performance measurement.

A good performance management system is appropriately supported by a performance measurement system which provides information that quantifies both the efficiency and effectiveness of organisational actions (Neely, Gregory and Platts, 2005). However, to make effective use of performance measurement outcomes, a transition from measurement to management has to occur to anticipate changes needed in strategic direction and identify methodologies for effecting strategic change (Amaratunga and Baldry, 2002). Consequently, PMSs embrace a broader perspective on the role of control in managing organisational performance thus underscoring internal and external business environments, formal and informal controls, as well as financial and non-financial information (Otley, 2003; Ferreira and Otley, 2009).

Hence, performance management can be defined as the use of performance measurement information to effect positive change in organisational culture, systems and processes, by setting agreed-upon performance goals, allocating and prioritising resources, informing managers to either confirm or change current policy or programme directions to meet those goals, and sharing results of performance in pursuing those goals (Amaratunga & Baldry, 2002). This also includes the concepts from human resource management that managing performance involves a cycle of clarifying business goals and then agreeing about individual objectives and standards of performance (Macaulay & Cook, 1994).

In this study, a performance management system is conceptualized as the management and control of organisational performance and encompasses all aspects of